MEMORANDUM OF UNDERSTANDING BY AND BETWEEN

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS,
FOOTHILL/EASTERN TRANSPORTATION CORRIDOR AGENCY AND
STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
REGARDING IMPLEMENTATION OF
TOLL FACILITY PRICING POLICY

This Memorandum of Understanding ("MOU") is entered as of September 5, 1991 by and between the Southern California Association of Governments ("SCAG"), the Foothill/Eastern Transportation Corridor Agency ("Agency") and the State of California Department of Transportation ("Caltrans") in consideration of the following facts.

1.0 Recitals.

- 1.1 SCAG is the metropolitan planning organization for the Southern California region. SCAG has adopted a Regional Mobility Plan ("RMP") which is a long-term plan for transportation improvements in Southern California. The RMP is a component of the 1989 Air Quality Management Plan ("1989 AQMP") approved by SCAG, the South Coast Air Quality Management District and the California Air Resources Board. includes the Foothill and Eastern Transportation Corridors (collectively "Projects") as proposed new facilities. analysis conducted with regard to the RMP assumed that the Eastern Transportation Corridor would be constructed between and Interstate 5 and that the Route 91 State Corridor would be constructed between Transportation Eastern Corridor and Interstate 5, and that the Projects would include eight lanes, including two High Occupancy Vehicle ("HOV") lanes, by the year 2010.
- 1.2 In March 1990, the SCAG Executive Committee adopted a Transportation Conformity Guidelines Handbook to establish procedures for determining the conformity of transportation projects with the 1989 AQMP in compliance with section 176 of the federal Clean Air Act. The Transportation Conformity Guidelines Handbook interpreted the RMP to allow the construction of HOV lanes on new facilities which are planned to include HOV lanes, including the Project, to be phased so long as such HOV lanes are constructed no later than the year 2010.
- 1.3 On November 15, 1990 the President signed the Clean Air Act Amendments of 1990 which revised the Transportation Conformity Provisions of the Clean Air Act

- established special procedures governing and determination of conformity under section 176 of the Act during the approval of to period prior interim Implementation Plan by the Environmental Protection Agency in compliance with the requirements of the Clean Air Amendments of 1990 ("CAA Amendments"). Pursuant to Section 176(c)(3)(B) of the Act, during the interim period a project's conformity "will be demonstrated" if it comes from a conforming transportation plan and program as defined in 176(c)(3)(A) of the Act and eliminates or reduces the severity and number of violations of the carbon monoxide standards in the area substantially affected by the project. With regard to reducing the severity and number of carbon monoxide violations, such determination may be made as part of the conformity determination of the transportation plan and program or for the individual project taken as a whole during the environmental review phase of project development.
- 1.4 On June 6, 1991, SCAG adopted revisions Transportation Control Measures 2.f and 13 of the 1991 Air Quality Management Plan to provide for the use of a toll pricing mechanism as an interim measure in lieu of construction of a HOV lane in the initial phase of The South Coast Air Quality Management District Project. adopted the revisions to Transportation Control Measures 2.f and 13 with certain further revisions concerning the use of toll pricing mechanisms as an interim measure in lieu of the construction of HOV lanes on toll facilities on July 12, 1991 which was reaffirmed on August 2, 1991. The toll pricing policy set forth in Transportation Control Measures 2.f and 13 is attached hereto as Exhibit A.
- pricing policy in the 1991 The toll establishes an average vehicle occupancy standard during peak commute periods of 1.5 passengers per vehicle by the end of Pricing mechanisms to achieve an average vehicle occupancy of 1.5 by the Agency may depend on a number of factors outside the control of the Agency including (i) financial limitations on the Agency's ability to increase toll pricing incentives and disincentives to a degree that will adversely affect the ability of the Project to generate adequately meet operation revenues to sufficient maintenance costs for the Project and otherwise comply with requirements of the Indenture of Trust and other commitments related to the financing of the Project, (ii) delays in the opening of the Project to traffic, and (iii) insufficient progress in the implementation of other transportation control measures in the Air Quality Management Plan by the responsible entity.

- 1.6 SCAG is presently in the process of preparing the 1991 Conformity Analysis for the 1991 TIP to comply with the requirements of section 176(c)(3)(A) of the Act and the interim guidance prepared by the Environmental Protection Agency and the U.S. Department of Transportation. With the understandings reached in this MOU, SCAG is agreeing to include the Projects in the Conformity Analysis of the TIP as four lane facilities with the inclusion of a toll pricing policy as described in this MOU.
- 1.7 This MOU is intended to implement the toll facility pricing policy set forth in Exhibit A, to establish an additional enforceable mechanism to insure that the toll facility pricing policy will be implemented, and to provide assurances to the Agency that the Projects are consistent with the description of the Projects in the RMP and that in the event that SCAG finds that the 1991 TIP complies with the requirements of section 176(c)(3)(A) of the Act, or otherwise conforms with the Act, SCAG will provide confirmation that the Projects are in conformity with the RMP, with the applicable State Implementation Plan and otherwise conforms with the applicable requirements of the federal Clean Air Act. This MOU shall be interpreted to be consistent with the requirements of the toll pricing policy adopted by SCAG and the SCAQMD.

2.0 Definitions.

Unless the context otherwise specifies or requires an alternate meaning, for the purposes of this MOU and following terms shall have the meanings set forth in this Section 2:

- TIP," "RTIP" and "1991 1991 TIP. The terms Transportation Improvement Program" "Regional 1991-1997 interchangeable and shall each mean the Transportation Improvement Program, as approved by SCAG.
- 2.2 Act. The term "Act" shall mean the federal Clean Air Act.
- 2.3 <u>Automatic Vehicle Identification System</u>. The terms "Automatic Vehicle Identification System" and "AVI" are interchangeable and shall each mean a system for automatically identifying vehicles as they pass through a lane of roadway.
- 2.4 <u>Authorized HOV</u>. The term "Authorized HOV" shall mean an HOV equipped with an AVI transponder or other similar devices, means or methods capable of identifying the HOV.

- 2.5 Average Vehicle Occupancy. The terms "Average Vehicle Occupancy" and "AVO" are interchangeable and shall each mean an estimate by the Agency, based on generally accepted traffic engineering principles and quarterly survey counts, of the average number of persons per Vehicle during the Peak Period in one direction on the Project.
- 2.6 AVO Goal. The term "AVO Goal" shall have the meaning set forth in Section 3 of this MOU.
- 2.7 <u>Comparable AVO</u>. The term "Comparable AVO" shall mean the average vehicle occupancy experienced in any year on comparable free corridors with free HOV Lanes in Orange County including, but not limited to, Interstate 5 and State Route 55 as applicable and shall be calculated taking into consideration the factors listed in Section 3.0. The Comparable AVO shall be calculated in a manner consistent with the calculation of AVO on the Project.
- 2.8 <u>High Occupancy Vehicle</u>. The terms "High Occupancy Vehicle" and "HOV" are interchangeable and shall each mean any Vehicle carrying a sufficient number of occupants to make that Vehicle eligible to use high occupancy vehicle lanes on the State transportation facilities connecting to the Project.
- 2.9 <u>MOU</u>. The term "MOU" shall mean this Memorandum of Understanding as it may from time to time be amended.
- 2.10 <u>Peak Period</u>. The term "Peak Period" shall mean a continuous 60 minute period designated by the Agency during a morning weekday commute hour other than Monday, Friday or a public holiday. With the concurrence of the SCAG Executive Director, which shall not unreasonably be withheld, Agency may vary the Peak Period from time to time to adjust for seasonal fluctuations, changes in travel patterns or other factors beyond Agency's control.
- 2.11 Opening. The term "Opening" shall mean the opening of a contiguous segment of the applicable Project to traffic which is greater than fifty-percent of the total length of the Project.
- 2.12 <u>RMP</u>. The term "RMP" shall mean the 1989 Regional Mobility Plan, a long-term plan developed and maintained by SCAG for transportation improvements in Southern California.
- 2.13 SCAQMD. The term "SCAQMD" shall mean the South Coast Air Quality Management District.

2.14 <u>Vehicle</u>. The term "Vehicle" shall mean any passenger vehicle, including autos, light duty trucks, passenger vans, buses and motorcycles.

NOW THEREFORE, the parties to this Memorandum of Understanding agree as follows:

3.0 Identification of Annual Average Vehicle Occupancy Goal.

No later than nine months prior to the Opening the applicable Project and annually each year after the Opening, the Executive Director of the Agency and the Executive Director of SCAG shall jointly establish a goal ("AVO Goal") concerning Average Vehicle Occupancy on the Project during peak commute periods. The first year AVO Goal shall be equivalent to The AVO Goal shall be a numeric value Comparable AVO. expressing the objective for AVO for the next applicable year and shall be expressed as a positive value (e.g. "1.35 occupants per vehicle.") The AVO Goal for the second and subsequent years shall be established no later than sixty days after the end of the previous year and shall be no less than the AVO Goal for the preceding year or Comparable AVO whichever A 1.5 AVO standard shall apply to 1999 and greater. The AVO Goal shall be calculated by the subsequent years. based on generally accepted traffic engineering Agency The AVO Goal shall be calculated in a manner principles. consistent with the calculation of Comparable AVO. The AVO Goal shall be established after taking into consideration the following factors which are needed to determine the Comparable AVO:

- (1) The background AVO within the Southern California region and within Orange County;
- (2) The most recent estimate of the AVO that would have been attained with the construction of two HOV lanes as part of the initial construction phase of the Project;
- (3) The type of vehicle trips projected to use the Project during the year following the establishment of the AVO Goal;
- (4) Other factors determined to be appropriate by the Agency and SCAG.

4.0 Implementation of Toll Pricing Policy.

4.1 Monitoring of Average Vehicle Occupancy.

Nine months prior to the Opening, the Agency shall establish and, no later than the Opening implement, a quarterly program ("Monitoring Program") to monitor AVO on the Project in such a manner so as to document the progress of the Agency in achieving the AVO Goal established pursuant to Section 3.0 and to allow a comparison of AVO on the Project with (i) the AVO that would have been attained in the event that the two planned HOV lanes had been built at the same time as the construction of the initial four lanes of the Project, and (ii) with the Comparable AVO. The Monitoring Program may be revised by the Agency from time to time. Any modification to the Monitoring Program shall be submitted to SCAG for review and comment.

4.2 Elements of Monitoring Program.

The elements of the Monitoring Program shall include the following:

- (1) The Agency shall monitor vehicle occupancy on the Project during the Peak Period in a manner consistent with Caltrans' monitoring procedures and that will allow for the calculation of AVO on the Project;
- (2) The Agency shall obtain available information compiled by the California Department of Transportation regarding Comparable AVO;
- (3) Beginning two years after the Opening, and annually each year thereafter, the Agency shall submit a report ("Monitoring Report") to SCAG and the SCAQMD which documents the AVO on the Project, the actions taken by the Agency to achieve the AVO Goal, and compares the AVO on the Project with the AVO Goal established pursuant to Section 3.0; and
- (4) The frequency of monitoring to be conducted by the Agency and the locations of monitoring stations. Monitoring shall be conducted at least quarterly.

5.0 Pricing Program.

5.1 Adoption of Pricing Mechanisms.

Prior to the Opening, the Agency shall, in its sole discretion, adopt one or more of the pricing mechanisms identified in this Section which it determines are necessary to achieve the initial AVO Goal. The pricing mechanisms available to the Agency include, but are not limited to, the following:

- (1) Reduced toll prices for HOV users;
- (2) Increased toll prices on single occupant vehicles during peak periods;
- (3) Reduced toll prices for HOV users that subscribe to the Automatic Vehicle Identification System;
- (4) Group discounts or other marketing programs intended to encourage employers and others subject to South Coast Air Quality Management District Regulation XV to reimburse or subsidize the HOV tolls paid by employees and other drivers affected by Regulation XV; and
- (5) Any other mechanism to increase AVO or to decrease single occupant vehicle usage on the Project.

5.2 Remedial Measures.

In the event that any Monitoring Report indicates that the Agency has not substantially achieved the AVO Goal established for the preceding year, then, in its sole discretion, the Agency shall revise its pricing mechanisms or take other remedial measures ("Remedial Measures") reasonably calculated by the Agency to achieve the AVO Goal established for the current year. Nothing in this MOU precludes the Agency, in its sole discretion, from deciding to dedicate or construct HOV lanes in lieu of the requirements of this MOU.

5.3 Additional Remedial Measures.

In the event that three consecutive Monitoring Reports indicate that the Agency has not substantially achieved the applicable AVO Goal, or by the end of calendar year 1999 an AVO of 1.5 has not been achieved, the Agency shall implement additional remedial measures. The additional remedial measures shall consist of dedicating an existing lane for exclusive use by HOV's, or proceeding to construct a separate HOV lane.

6.0 SCAG Conformity Finding.

In consideration of the Agency's commitments in this MOU to implement procedures to achieve the AVO Goal for the applicable Project, SCAG agrees that it will (i) include the Project as a four lane facility for the year 2000 in the 1991 Conformity Analysis for the 1991 TIP and model the Projects as eight lane facilities, including two HOV lanes, in the RMP for the year 2010, (ii) find that the construction and operation of the Project, including implementation of the toll pricing policy described in this MOU, is consistent with the Project design concept and scope in the RMP, and (iii) in the event that the 1991 TIP complies with the finds SCAG requirements of section 176(c)(3)(A) of the Act or otherwise conforms with the Act, promptly provide a written confirmation to the Agency and the Federal Highway Administration that the construction of four lanes on the Project and other proposed components of the Project, including implementation of the toll pricing policy described in this MOU, is consistent and is in conformity with the RMP, the 1979 State Implementation Plan, the 1989 AQMP, the 1991 AQMP, and otherwise complies with the requirements of section 176(c)(3)(B) of the Act.

7.0 Toll Pricing Study.

The Agency shall conduct a study ("Pricing Study") evaluating the effectiveness of the use of toll pricing mechanisms to achieve an AVO on the Project which is comparable to the Comparable AVO. The Pricing Study shall be conducted in accordance with the scope of work attached hereto as Exhibit B.

8.0 Administrative Dispute Resolution Mechanism.

8.1 In General.

In the event that SCAG and the Agency are unable to agree with regard to the administration or implementation of this MOU, either SCAG or the Agency may initiate the resolution of the disagreement pursuant to this Section 8.0. The dispute resolution process shall be a mandatory precondition to the initiation of any judicial proceeding to resolve any such disagreement between the parties or to otherwise seek to enforce the provisions of this MOU.

8.2 Initiation of Dispute Resolution Procedures.

Any party to this MOU may initiate the dispute resolution process by written notice to the other two parties. Within fifteen days of the receipt of such written notice

("Notice Date") the parties shall meet and confer and attempt to resolve the disagreement.

8.3 Mediation Panel.

In the event that the parties are unable to resolve the disagreement through the meet and conferral process, within forty-five days of the Notice Date each party to this MOU shall appoint an individual to serve on a mediation panel. In the event that Caltrans does not become a party to this MOU, the third member of the mediation panel shall be appointed by the individuals appointed by the Agency and SCAG. The mediation panel shall consider any evidence provided by the parties and make a recommendation regarding the matter subject to mediation. To the extent practicable, the proceedings of the mediation panel shall be governed by the rules of the American Arbitration Association.

8.4 Non-Binding Recommendations.

Within one hundred twenty days of the Notice Date the Mediation Panel shall make non-binding recommendations to the parties to resolve the matter subject to the dispute resolution process. If either party determines that any such recommendation is unacceptable, it may initiate a judicial proceeding in a court of competent jurisdiction.

9.0 Miscellaneous.

9.1 Integration.

the entire and integrated This MOU embodies understanding between the parties to this MOU regarding the contemplated herein and supersedes all representations, proposals or understandings, or written. This MOU may only be amended by a negotiations, either oral or written. written instrument executed by all of the parties. A copy of any proposed amendment shall be provided to the SCAQMD.

9.2 Multiple Originals.

Multiple Copies of this MOU may be executed, and any such executed copy shall be deemed an original for all purposes.

9.3 Limitations.

Nothing in this MOU requires the Agency to (i) achieve or maintain any AVO which exceeds any AVO Goal established pursuant to this MOU, (ii) in any event achieve or maintain an AVO of greater than 1.5, (iii) achieve or maintain any AVO if

an exclusive HOV lane in each direction is dedicated or constructed on the Project, or (iv) make payments of any type to encourage or subsidize the use of the Project by HOV's.

9.4 Effective Date.

This MOU shall become effective upon its execution by the Agency and SCAG.

9.5 Enforceability.

This MOU shall be enforceable by SCAG, Caltrans and the Agency. In addition, in the event that SCAG and the Agency abuse their discretion establishing any AVO Goal as required by Section 3.0, or the Agency fails to implement Remedial Measures as required by Section 5.0, or fails to achieve a 1.5 AVO by the end of calendar year 1999, and if SCAG has not initiated the dispute resolution process or is not diligently seeking to enforce the terms of this MOU, then the SCAQMD may initiate appropriate action to enforce the requirements of this MOU in accordance with this Section 9.5. In the event that the SCAQMD intends to seek the enforcement of this MOU, it shall first give written notice to SCAG and the Agency and request the initiation of the dispute resolution process pursuant to Section 8.0 of this MOU. In such event, the SCAQMD may appear as an interested party in the dispute resolution process with the same rights as the parties except that the SCAQMD shall not have the right to appoint a mediator. In addition, SCAQMD may at its option participate as amicus curiae in the dispute resolution process initiated by SCAG. Nothing in this MOU is intended to confer or deny standing to other third parties to seek to enforce this MOU or the 1991 AQMP under applicable law.

9.6 Force Majeure.

In the event that the Agency's performance under this MOU is interrupted or delayed by acts of God, acts of war, labor disputes or delays in the Opening as a result of the acts of third parties (collectively "Occurrences"), then the Agency's performance shall be excused from any further performance for whatever period of time after the Occurrences is reasonably necessary to remedy the effects of the Occurrences, provided that delays as a result of labor disputes or acts of third parties shall not excuse compliance with a 1.5 AVO in 1999 without the agreement of SCAG and the SCAQMD.

9.7 Existing Law.

Nothing in this MOU is intended to amend, supersede or modify any provisions of state or federal law or the 1991 AQMP.

9.8 Public Transit Buses.

The Agency will provide free access to the Project for buses operated by public transit agencies, provided that such buses are equipped with AVI devices as specified from time to time by the Agency. The Agency reserves the right to rescind the provision of free access if at any time the Agency determines in its sole discretion that the provision of such free access will adversely affect the Agency's ability to adequately meet operation and maintenance costs or comply with commitments related to the financing of the Project.

Dated: September 12 ,	1991	Foothill/Eastern	Transportation
		Corridor Agency	
			1
		1/1	

Gene Wisner

Dated: <u>September 12</u>, 1991 Southern California Association of Governments

John Flynn, President, SCAG Supervisor, Ventura County

BY LANU O Lightly

Dated: September 12 , 1991 State of California Department of Transportation

OR1:525

SUPPLEMENT TO

AGENDA ITEM #31 - SUMMARY OF MOTIONS ON THE AQMP ATTACHMENT II (PAGE SUPERNUMBER 6)

AMENDMENT TO PROPOSED LANGUAGE TO CONTROL MEASURE 2f (HOV FACILITIES) AS ADOPTED BY SCAG EXECUTIVE COMMITTEE ON 8/1/91.

(new SCAG language shown in double underline)

Motion:

Dr. Wilson moved to amend the main motion to include language in control measure 2f which would allow toll certain facilities the flexibility of guaranteeing priority to high occupancy vehicles (HOV) of not less than 50% of the capacity of two lanes in each direction, rather than constructing dedicated separate HOV-only lanes.

Response:

Control Measures 2f Appendix IV-E (page I-64), has been amended to read:

Require that where HOV lanes are identified for construction in the Regional Mobility Plan they be constructed except for a toll facility may substitute a pricing policy which allows for free or reduced tolls for HOVs, that achieves Average Vehicle Occupancy (AVO) rates that would be attained by an HOV lane, as an interim action. The conformity determination shall contain an HOV equivalency finding. SCAG will make this finding in consultation with the District. But, in any case the lane would have to be constructed or dedicated to HOV by 2010.

Nothwithstanding the previous sentence, State Route 91 toll facilities located in existing corridors where the Regional Mobility Plan authorizes one mixed-flow lane and one HOV lane in each direction may provide the equivalent AVO through operational and pricing policies which allow HOV's priority access to not less than 50% of the capacity of two lanes in each direction. Toll facilities which provide equivalent AVO pursuant to this paragraph shall, except as provided in the next paragraph, not be required to construct or dedicate separate HOV-only lanes. Furthermore, a market pricing approach, as set forth above for State Route 91 median is applicable to this facility only (demonstration), with the provision that when the toll road franchise terminates, the facility would have the same lane configuration as called for in the Regional Mobility Plan.

An annual monitoring program shall be required for toll road corridors to assess the effectiveness of pricing policies in achieving

the AVO requirements. AVO shall be increased to a level found on comparable freeways with separate HOV lanes, and, by 1999, an AVO of 1.5 during hours of peak commute. If this is not achieved, HOV lanes shall be constructed or dedicated. If AVO equivalency with comparable mixed-flow/HOV lanes is not demonstrated for one monitoring period, remedial action will be initiated. The first monitoring period shall conclude two years after initiation of operation and each subsequent period annually thereafter. Remedial action will consist of measures such as either revising the pricing structure, dedicating an existing lane for exclusive HOV use, or proceeding to construct a separate HOV lane. A legally enforceable mechanism which would ensure that the HOV equivalency demonstration will be achieved, that the appropriate monitoring occurs, and remedial action is taken, if necessary, must be in place prior to a conformity finding being made.

MODELING THE EFFECTS OF TOLL AND OTHER CHARGES' Southern California Association of Governments

(1) INTRODUCTION

A. Transportation Modeling

SCAG's Regional Transportation Modeling System consists of a set of steps; trip generation, trip distribution, mode choice, and trip assignment. These four stages comprise the traditional travel demand forecasting process, which is implemented by utilizing the Urban Transportation Planning System (UTPS). This is a package of software programs distributed jointly by UMTA and FHWA, and used by planning agencies throughout the United States and in other countries.

The Trip Generation model estimates the number of trips generated by the residents of each zone.

Key Variables: socioeconomic data (population, employment, income)

Trip Distribution model estimates the number of trips between zones.

Key Variables: travel time between origin and destination, attractivity of destination

Mode Choice model determines which of four modes (driving alone, two person carpool, three+ person carpool, or transit) a commuter will choose.

Key Variables: in-vehicle time, out-of-vehicle time, travel cost

Trip Assignment is the process by which the trips are assigned to the specific paths that occur between zonal pairs.

Key Variables: travel time and capacity on each link of the transportation network

8. Modeling Tolls

In order to model toll charges and other charges to travelers, additional cost concepts will have to be introduced to the Trip Distribution and Trip Assignment models. The criterion used in the path finding has traditionally been travel time, but to estimate the effect of toll and other charges, the concept of "Impedance/Disutility" need to be used in the path criterion. Impedance can be measured in dollars (or minutes).

The Impedance between Origin and Destination is:

a = time coefficient in dollars per hour

b = distance coefficient in dollars per mile

c = toll coefficient in dollars

e values for coefficients a, b, and c need to be estimated and tested to find the best fit.

The "impedance" between zone of origin and zone of destination will show the effects of toll and other charges on trip distribution, mode choice, and trip assignment stages.

(2) PROCEDURES FOR CALCULATING AVO DUE TO PRICING

The following is SCAG's procedure to demonstrate how the pricing policy will accomplish the same AVO as would be accompolished by constructing an HOV lane.

- a. The following data need to be used (SCAG can provide them)
 - 1. year 1987 HBW vehicle trip table for SOV
 - 2. year 1987 HBW vehicle trip table for 2 person
 - 3. year 1987 HBW vehicle trip table for 3 or more person
 - 4. year 1987 Non HBW vehicle trip table
 - 5. year 1987 Highway Network
 - 6. year 2000 HBW vehicle trip table for SOV
 - 7. year 2000 HBW vehicle trip table for 2 person
 - 8. year 2000 HBW vehicle trip table for 3 or more person
 - 9. year 2000 Non HBW vehicle trip table
 - 10. year 2000 Highway Network
- b. Values for coefficients a, b, and c in (EQ1) need to be estimated and tested.
- c. Convert the above trip tables to peak period trip tables in 0 & D format (SCAG can assist).
- d. Run traffic assignment model using impedances reflecting tolls/pricing schedule.
- e. Calculate AVO for the corridor.
- f. Repeat steps with changed pricing schedule until desired AVO is achieved: